

Modifi Biosciences Acquired by Merck

Merck gains preclinical compounds designed to exploit DNA repair defects in difficult to treat cancers



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Modifi Biosciences, Inc. →
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New Haven, Conn., October 23, 2024 – [Modifi Biosciences](#), Inc. (“Modifi Biosciences”) a leader in the development of direct DNA modification enabled cancer therapeutics, today announced that the company has been acquired by Merck, known as MSD outside of the United States and Canada.

“In founding Modifi Biosciences, we sought to radically change the oncology treatment paradigm for cancer patients with glioblastoma and other tumors,” said Ranjit S. Bindra, MD, PhD, Modifi Biosciences Co-founder, Harvey and Kate Cushing, Professor of Therapeutic Radiology at Yale School of Medicine, and Scientific Director of the Yale Brain Tumor Center at Smilow Cancer Hospital. “We are honored to have Merck recognize the potential of our science, and as an oncology company, they are perfectly positioned to advance our innovations through clinical trials and commercialization.”

Under the terms of the agreement Merck, through a subsidiary, has acquired all outstanding shares of Modifi Biosciences for \$30 million upfront. Modifi

Biosciences shareholders are also eligible to receive potential milestone payments totaling up to \$1.3 billion.

Modifi Biosciences, a Yale University spinout company formed in 2021, has developed a novel class of small molecules that target cancer cells lacking expression of a key DNA repair protein called O6-methylguanine methyl transferase (MGMT). Modifi Biosciences' research has been validated through its initial work published by the academic founders in [Science](#) in 2022, and subsequent compelling pre-clinical data across a number of tumor models including patient-derived xenograft models of gliomas and other cancers with intrinsic DNA repair defects.

“DNA repair defects are a frequent hallmark of tumor cells and a major cause of resistance to cancer therapy,” said Dr. David Weinstock, vice president, discovery oncology, Merck Research Laboratories. “The talented Modifi Biosciences team has developed an innovative approach that we believe has potential for treating some of the most refractory cancer types.”

“We designed our small molecules to have the ability to uniquely overcome clinical resistance mechanisms that have been known for decades but until now have been non-actionable. Additionally, we created the molecules in a manner which allows them to be rapidly progressed from bench-to bedside,” said Seth Herzon, PhD, Modifi Biosciences co-founder and the Milton Harris '29 PhD Professor of Chemistry in Yale's Faculty of Arts and Sciences and Professor of Pharmacology and Therapeutic Radiology at the Yale School of Medicine.

About Modifi Biosciences

Modifi Biosciences was formed in 2021 based on technology spun out of Yale University. Financing was led by HighCape Capital and other investors including Advantage Capital; Connecticut Innovations; BrightEdge, the impact investment and innovation arm of the American Cancer Society (ACS); National Brain Tumor Society's Brain Tumor Investment Fund; Pathway Bioventures; The Sontag Foundation's impact investment subsidiary Sontag Innovation Fund; and Yale Ventures.

Based in New Haven, CT, the company is a leader in the development of direct DNA modification enabled cancer therapeutics. These therapeutics derive their efficacy by targeting tumor-associated DNA repair defects. Aiming to improve the standard of cancer therapy and patient care, the Modifi Biosciences team includes world-renowned scientists, clinicians and experienced biotech entrepreneurs with deep expertise in synthetic chemistry, DNA repair, and translational research in oncology.

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